

FIG. 1A

atg att gtt ttt ctg gtt ttt aaa cat ctc ttc agc ctc aga ttg att	48
<u>Met Ile Val Phe Leu Val Phe Lys His Leu Phe Ser Leu Arg Leu Ile</u>	
1 5 10 15	
aca atg ttc ttt cta ctt cat ttc atc gtt ctg atc aat gtc aaa gat	96
<u>Thr Met Phe Phe Leu Leu His Phe Ile Val Leu Ile Asn Val Lys Asp</u>	
20 25 30	
ttt gca ctg act caa ggt agc atg atc act cct tca tgc caa aaa gga	144
<u>Phe Ala Leu Thr</u> Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly	
35 40 45	
tat ttt ccc tgt ggg aat ctt acc aag tgc tta ccc cga gct ttt cac	192
<u>Tyr Phe Pro Cys Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His</u>	
50 55 60	
tgt gat ggc aag gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt	240
<u>Cys Asp Gly Lys Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys</u>	
65 70 75 80	
ggg gac act agt gga tgg gcg acc ata ttt ggc aca gtg cat gga aat	288
<u>Gly Asp Thr Ser Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn</u>	
85 90 95	
gct aac agc gtg gcc tta aca cag gag tgc ttt cta aaa cag tat cca	336
<u>Ala Asn Ser Val Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro</u>	
100 105 110	
caa tgc tgt gac tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac	384
<u>Gln Cys Cys Asp Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp</u>	
115 120 125	
tta aag tct gtg ccg atg att tct aac aat gtg aca tta ctg tct ctt	432
<u>Leu Lys Ser Val Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu</u>	
130 135 140	
aag aaa aac aaa atc cac agt ctt cca gat aaa gtt ttc atc aaa tac	480
<u>Lys Lys Asn Lys Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr</u>	
145 150 155 160	
aca aaa ctt aaa aag ata ttt ctt cag cat aat tgc att aga cac ata	528
<u>Thr Lys Leu Lys Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile</u>	
165 170 175	
tcc agg aaa gca ttt ttt gga tta tgt aat ctg caa ata tta tat ctc	576
<u>Ser Arg Lys Ala Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu</u>	
180 185 190	
aac cac aac tgc atc aca acc ctc aga cct gga ata ttc aaa gac tta	624
<u>Asn His Asn Cys Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu</u>	
195 200 205	

FIG. 1A

FIG. 1B

cat	cag	cta	act	tgg	cta	att	cta	gat	gac	aat	cca	ata	acc	aga	att	672
His	Gln	Leu	Thr	Trp	Leu	Ile	Leu	Asp	Asp	Asn	Pro	Ile	Thr	Arg	Ile	
210						215					220					
tca	cag	cgc	ttg	ttt	acg	gga	tta	aat	tcc	ttg	ttt	ttc	ctg	tct	atg	720
Ser	Gln	Arg	Leu	Phe	Thr	Gly	Leu	Asn	Ser	Leu	Phe	Phe	Leu	Ser	Met	
225					230					235					240	
gtt	aat	aac	tac	tta	gaa	gct	ctt	ccc	aag	cag	atg	tgt	gcc	caa	atg	768
Val	Asn	Asn	Tyr	Leu	Glu	Ala	Leu	Pro	Lys	Gln	Met	Cys	Ala	Gln	Met	
				245					250					255		
cct	caa	ctc	aac	tgg	gtg	gat	ttg	gaa	ggc	aat	aga	ata	aag	tat	ctc	816
Pro	Gln	Leu	Asn	Trp	Val	Asp	Leu	Glu	Gly	Asn	Arg	Ile	Lys	Tyr	Leu	
			260					265						270		
aca	aat	tct	acg	ttt	ctg	tcg	tgc	gat	tcg	ctc	aca	gtg	ctg	ttt	ctg	864
Thr	Asn	Ser	Thr	Phe	Leu	Ser	Cys	Asp	Ser	Leu	Thr	Val	Leu	Phe	Leu	
			275				280						285			
cct	aga	aat	caa	att	ggg	ttt	gtt	cca	gag	aag	aca	ttt	tct	tca	tta	912
Pro	Arg	Asn	Gln	Ile	Gly	Phe	Val	Pro	Glu	Lys	Thr	Phe	Ser	Ser	Leu	
	290					295					300					
aaa	aat	tta	gga	gaa	ctg	gat	ctg	tct	agc	aat	acg	ata	acg	gag	cta	960
Lys	Asn	Leu	Gly	Glu	Leu	Asp	Leu	Ser	Ser	Asn	Thr	Ile	Thr	Glu	Leu	
305					310					315					320	
tca	cct	cac	ctt	ttt	aaa	gac	ttg	aag	ctt	cta	caa	aag	ctg	aac	ctg	1008
Ser	Pro	His	Leu	Phe	Lys	Asp	Leu	Lys	Leu	Leu	Gln	Lys	Leu	Asn	Leu	
				325					330					335		
tca	tcc	aat	cct	ctt	atg	tat	ctt	cac	aag	aac	cag	ttt	gaa	agt	ctt	1056
Ser	Ser	Asn	Pro	Leu	Met	Tyr	Leu	His	Lys	Asn	Gln	Phe	Glu	Ser	Leu	
			340					345					350			
aaa	caa	ctt	cag	tct	cta	gac	ctg	gaa	agg	ata	gag	att	cca	aat	ata	1104
Lys	Gln	Leu	Gln	Ser	Leu	Asp	Leu	Glu	Arg	Ile	Glu	Ile	Pro	Asn	Ile	
			355				360					365				
aac	aca	cga	atg	ttt	caa	ccc	atg	aag	aat	ctt	tct	cac	att	tat	ttc	1152
Asn	Thr	Arg	Met	Phe	Gln	Pro	Met	Lys	Asn	Leu	Ser	His	Ile	Tyr	Phe	
	370					375					380					
aaa	aac	ttt	cga	tac	tgc	tcc	tat	gct	ccc	cat	gtc	cga	ata	tgt	atg	1200
Lys	Asn	Phe	Arg	Tyr	Cys	Ser	Tyr	Ala	Pro	His	Val	Arg	Ile	Cys	Met	
385					390					395					400	
ccc	ttg	acg	gac	ggc	att	tct	tca	ttt	gag	gac	ctc	ttg	gct	aac	aat	1248
Pro	Leu	Thr	Asp	Gly	Ile	Ser	Ser	Phe	Glu	Asp	Leu	Leu	Ala	Asn	Asn	
				405					410					415		

FIG. 1C

atc ctc aga ata ttt gtc tgg gtt ata gct ttc att acc tgc ttt gga	1296
Ile Leu Arg Ile Phe Val Trp Val Ile Ala Phe Ile Thr Cys Phe Gly	
420 425 430	
aat ctt ttt gtc att ggc atg aga tct ttc att aaa gct gaa aat aca	1344
Asn Leu Phe Val Ile Gly Met Arg Ser Phe Ile Lys Ala Glu Asn Thr	
435 440 445	
act cac gct atg tcc atc aaa atc ctt tgt tgt gct gat tgc ctg atg	1392
Thr His Ala Met Ser Ile Lys Ile Leu Cys Cys Ala Asp Cys Leu Met	
450 455 460	
ggt gtt tac ttg ttc ttt gtt ggc att ttc gat ata aaa tac cga ggg	1440
Gly Val Tyr Leu Phe Phe Val Gly Ile Phe Asp Ile Lys Tyr Arg Gly	
465 470 475 480	
cag tat cag aag tat gcc ttg ctg tgg atg gag agc gtg cag tgc cgc	1488
Gln Tyr Gln Lys Tyr Ala Leu Leu Trp Met Glu Ser Val Gln Cys Arg	
485 490 495	
ctc atg ggg ttc ctg gcc atg ctg tcc acc gaa gtc tct gtt ctg cta	1536
Leu Met Gly Phe Leu Ala Met Leu Ser Thr Glu Val Ser Val Leu Leu	
500 505 510	
ctg acc tac ttg act ttg gag aag ttc ctg gtc att gtc ttc ccc ttc	1584
Leu Thr Tyr Leu Thr Leu Glu Lys Phe Leu Val Ile Val Phe Pro Phe	
515 520 525	
agt aac att cga cct gga aaa cgg cag acc tca gtc atc ctc att tgc	1632
Ser Asn Ile Arg Pro Gly Lys Arg Gln Thr Ser Val Ile Leu Ile Cys	
530 535 540	
atc tgg atg gcg gga ttt tta ata gct gta att cca ttt tgg aat aag	1680
Ile Trp Met Ala Gly Phe Leu Ile Ala Val Ile Pro Phe Trp Asn Lys	
545 550 555 560	
gat tat ttt gga aac ttt tat ggg aaa aat gga gta tgt ttc cca ctt	1728
Asp Tyr Phe Gly Asn Phe Tyr Gly Lys Asn Gly Val Cys Phe Pro Leu	
565 570 575	
tat tat gac caa aca gaa gat att gga agc aaa ggg tat tct ctt gga	1776
Tyr Tyr Asp Gln Thr Glu Asp Ile Gly Ser Lys Gly Tyr Ser Leu Gly	
580 585 590	
att ttc cta ggt gtg aac ttg ctg gct ttt ctc atc att gtg ttt tcc	1824
Ile Phe Leu Gly Val Asn Leu Leu Ala Phe Leu Ile Ile Val Phe Ser	
595 600 605	
tat att act atg ttc tgt tcc att caa aaa acc gcc ttg cag acc aca	1872
Tyr Ile Thr Met Phe Cys Ser Ile Gln Lys Thr Ala Leu Gln Thr Thr	
610 615 620	

FIG. 1D

gaa gta agg aat tgt ttt gga aga gag gtg gct gtt gca aat cgt ttc	1920
Glu Val Arg Asn Cys Phe Gly Arg Glu Val Ala Val Ala Asn Arg Phe	
625 630 635 640	
ttt ttt ata gtg ttc tct gat gcc atc tgc tgg att cct gta ttt gta	1968
Phe Phe Ile Val Phe Ser Asp Ala Ile Cys Trp Ile Pro Val Phe Val	
645 650 655	
gtt aaa atc ctt tcc ctc ttc cgg gtg gaa ata cca gac aca atg act	2016
Val Lys Ile Leu Ser Leu Phe Arg Val Glu Ile Pro Asp Thr Met Thr	
660 665 670	
tcc tgg ata gtg att ttt ttc ctt cca gtt aac agt gct ttg aat cca	2064
Ser Trp Ile Val Ile Phe Phe Leu Pro Val Asn Ser Ala Leu Asn Pro	
675 680 685	
atc ctc tat act ctc aca acc aac ttt ttt aag gac aag ttg aaa cag	2112
Ile Leu Tyr Thr Leu Thr Thr Asn Phe Phe Lys Asp Lys Leu Lys Gln	
690 695 700	
ctg ctg cac aaa cat cag agg aaa tca att ttc aaa att aaa aaa aaa	2160
Leu Leu His Lys His Gln Arg Lys Ser Ile Phe Lys Ile Lys Lys Lys	
705 710 715 720	
agt tta tct aca tcc att gtg tgg ata gag gac tcc tct tcc ctg aaa	2208
Ser Leu Ser Thr Ser Ile Val Trp Ile Glu Asp Ser Ser Ser Leu Lys	
725 730 735	
ctt ggg gtt ttg aac aaa ata aca ctt gga gac agt ata atg aaa cca	2256
Leu Gly Val Leu Asn Lys Ile Thr Leu Gly Asp Ser Ile Met Lys Pro	
740 745 750	
gtt tcc tag	2265
Val Ser	
755	

FIG. 2A

caa ggt agc atg atc act cct tca tgc	caa aaa gga tat ttt ccc tgt	48
Gln Gly Ser Met Ile Thr Pro Ser Cys	Gln Lys Gly Tyr Phe Pro Cys	
1 5 10 15		
ggg aat ctt acc aag tgc tta ccc cga gct ttt cac tgt gat ggc aag	96	
Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His Cys Asp Gly Lys		
20 25 30		
gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt ggt gac act agt	144	
Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys Gly Asp Thr Ser		
35 40 45		
gga tgg gcg acc ata ttt ggc aca gtg cat gga aat gct aac agc gtg	192	
Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn Ala Asn Ser Val		
50 55 60		
gcc tta aca cag gag tgc ttt cta aaa cag tat cca caa tgc tgt gac	240	
Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro Gln Cys Cys Asp		
65 70 75 80		
tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac tta aag tct gtg	288	
Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp Leu Lys Ser Val		
85 90 95		
ccg atg att tct aac aat gtg aca tta ctg tct ctt aag aaa aac aaa	336	
Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu Lys Lys Asn Lys		
100 105 110		
atc cac agt ctt cca gat aaa gtt ttc atc aaa tac aca aaa ctt aaa	384	
Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr Thr Lys Leu Lys		
115 120 125		
aag ata ttt ctt cag cat aat tgc att aga cac ata tcc agg aaa gca	432	
Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile Ser Arg Lys Ala		
130 135 140		
ttt ttt gga tta tgt aat ctg caa ata tta tat ctc aac cac aac tgc	480	
Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu Asn His Asn Cys		
145 150 155 160		
atc aca acc ctc aga cct gga ata ttc aaa gac tta cat cag cta act	528	
Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu His Gln Leu Thr		
165 170 175		
tgg cta att cta gat gac aat cca ata acc aga att tca cag cgc ttg	576	
Trp Leu Ile Leu Asp Asp Asn Pro Ile Thr Arg Ile Ser Gln Arg Leu		
180 185 190		
ttt acg gga tta aat tcc ttg ttt ttc ctg tct atg gtt aat aac tac	624	
Phe Thr Gly Leu Asn Ser Leu Phe Phe Leu Ser Met Val Asn Asn Tyr		
195 200 205		

FIG. 2B

tta gaa gct ctt ccc aag cag atg tgt gcc caa atg cct caa ctc aac	672
Leu Glu Ala Leu Pro Lys Gln Met Cys Ala Gln Met Pro Gln Leu Asn	
210 215 220	
tgg gtg gat ttg gaa ggc aat aga ata aag tat ctc aca aat tct acg	720
Trp Val Asp Leu Glu Gly Asn Arg Ile Lys Tyr Leu Thr Asn Ser Thr	
225 230 235 240	
ttt ctg tgc tgc gat tgc ctc aca gtg ctg ttt ctg cct aga aat caa	768
Phe Leu Ser Cys Asp Ser Leu Thr Val Leu Phe Leu Pro Arg Asn Gln	
245 250 255	
att ggt ttt gtt cca gag aag aca ttt tct tca tta aaa aat tta gga	816
Ile Gly Phe Val Pro Glu Lys Thr Phe Ser Ser Leu Lys Asn Leu Gly	
260 265 270	
gaa ctg gat ctg tct agc aat acg ata acg gag cta tca cct cac ctt	864
Glu Leu Asp Leu Ser Ser Asn Thr Ile Thr Glu Leu Ser Pro His Leu	
275 280 285	
ttt aaa gac ttg aag ctt cta caa aag ctg aac ctg tca tcc aat cct	912
Phe Lys Asp Leu Lys Leu Leu Gln Lys Leu Asn Leu Ser Ser Asn Pro	
290 295 300	
ctt atg tat ctt cac aag aac cag ttt gaa agt ctt aaa caa ctt cag	960
Leu Met Tyr Leu His Lys Asn Gln Phe Glu Ser Leu Lys Gln Leu Gln	
305 310 315 320	
tct cta gac ctg gaa agg ata gag att cca aat ata aac aca cga atg	1008
Ser Leu Asp Leu Glu Arg Ile Glu Ile Pro Asn Ile Asn Thr Arg Met	
325 330 335	
ttt caa ccc atg aag aat ctt tct cac att tat ttc aaa aac ttt cga	1056
Phe Gln Pro Met Lys Asn Leu Ser His Ile Tyr Phe Lys Asn Phe Arg	
340 345 350	
tac tgc tcc tat gct ccc cat gtc cga ata tgt atg ccc ttg acg gac	1104
Tyr Cys Ser Tyr Ala Pro His Val Arg Ile Cys Met Pro Leu Thr Asp	
355 360 365	
ggc att tct tca ttt gag gac ctc ttg gct aac aat atc ctc aga	1149
Gly Ile Ser Ser Phe Glu Asp Leu Leu Ala Asn Asn Ile Leu Arg	
370 375 380	

FIG. 3A

atg att gtt ttt ctg gtt ttt aaa cat ctc ttc agc ctc aga ttg att	48
<u>Met Ile Val Phe Leu Val Phe Lys His Leu Phe Ser Leu Arg Leu Ile</u>	
1 5 10 15	
aca atg ttc ttt cta ctt cat ttc atc gtt ctg atc aat gtc aaa gat	96
<u>Thr Met Phe Phe Leu Leu His Phe Ile Val Leu Ile Asn Val Lys Asp</u>	
20 25 30	
ttt gca ctg act caa ggt agc atg atc act cct tca tgc caa aaa gga	144
<u>Phe Ala Leu Thr</u> Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly	
35 40 45	
tat ttt ccc tgt ggg aat ctt acc aag tgc tta ccc cga gct ttt cac	192
<u>Tyr Phe Pro Cys Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His</u>	
50 55 60	
tgt gat ggc aag gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt	240
<u>Cys Asp Gly Lys Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys</u>	
65 70 75 80	
ggg gac act agt gga tgg gcg acc ata ttt ggc aca gtg cat gga aat	288
<u>Gly Asp Thr Ser Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn</u>	
85 90 95	
gct aac agc gtg gcc tta aca cag gag tgc ttt cta aaa cag tat cca	336
<u>Ala Asn Ser Val Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro</u>	
100 105 110	
caa tgc tgt gac tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac	384
<u>Gln Cys Cys Asp Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp</u>	
115 120 125	
tta aag tct gtg ccg atg att tct aac aat gtg aca tta ctg tct ctt	432
<u>Leu Lys Ser Val Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu</u>	
130 135 140	
aag aaa aac aaa atc cac agt ctt cca gat aaa gtt ttc atc aaa tac	480
<u>Lys Lys Asn Lys Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr</u>	
145 150 155 160	
aca aaa ctt aaa aag ata ttt ctt cag cat aat tgc att aga cac ata	528
<u>Thr Lys Leu Lys Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile</u>	
165 170 175	
tcc agg aaa gca ttt ttt gga tta tgt aat ctg caa ata tta tat ctc	576
<u>Ser Arg Lys Ala Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu</u>	
180 185 190	
aac cac aac tgc atc aca acc ctc aga cct gga ata ttc aaa gac tta	624
<u>Asn His Asn Cys Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu</u>	
195 200 205	

FIG. 3B

cat	cag	cta	act	tgg	cta	att	cta	gat	gac	aat	cca	ata	acc	aga	att	672
His	Gln	Leu	Thr	Trp	Leu	Ile	Leu	Asp	Asp	Asn	Pro	Ile	Thr	Arg	Ile	
210						215					220					
tca	cag	cgc	ttg	ttt	acg	gga	tta	aat	tcc	ttg	ttt	ttc	ctg	tct	atg	720
Ser	Gln	Arg	Leu	Phe	Thr	Gly	Leu	Asn	Ser	Leu	Phe	Phe	Leu	Ser	Met	
225					230					235					240	
gtt	aat	aac	tac	tta	gaa	gct	ctt	ccc	aag	cag	atg	tgt	gcc	caa	atg	768
Val	Asn	Asn	Tyr	Leu	Glu	Ala	Leu	Pro	Lys	Gln	Met	Cys	Ala	Gln	Met	
				245					250					255		
cct	caa	ctc	aac	tgg	gtg	gat	ttg	gaa	ggc	aat	aga	ata	aag	tat	ctc	816
Pro	Gln	Leu	Asn	Trp	Val	Asp	Leu	Glu	Gly	Asn	Arg	Ile	Lys	Tyr	Leu	
			260				265						270			
aca	aat	tct	acg	ttt	ctg	tcg	tgc	gat	tcg	ctc	aca	gtg	ctg	gat	ctg	864
Thr	Asn	Ser	Thr	Phe	Leu	Ser	Cys	Asp	Ser	Leu	Thr	Val	Leu	Asp	Leu	
	275						280					285				
tct	agc	aat	acg	ata	acg	gag	cta	tca	cct	cac	ctt	ttt	aaa	gac	ttg	912
Ser	Ser	Asn	Thr	Ile	Thr	Glu	Leu	Ser	Pro	His	Leu	Phe	Lys	Asp	Leu	
	290					295					300					
aag	ctt	cta	caa	aag	ctg	aac	ctg	tca	tcc	aat	cct	ctt	atg	tat	ctt	960
Lys	Leu	Leu	Gln	Lys	Leu	Asn	Leu	Ser	Ser	Asn	Pro	Leu	Met	Tyr	Leu	
305					310					315					320	
cac	aag	aac	cag	ttt	gaa	agt	ctt	aaa	caa	ctt	cag	tct	cta	gac	ctg	1008
His	Lys	Asn	Gln	Phe	Glu	Ser	Leu	Lys	Gln	Leu	Gln	Ser	Leu	Asp	Leu	
				325					330					335		
gaa	agg	ata	gag	att	cca	aat	ata	aac	aca	cga	atg	ttt	caa	ccc	atg	1056
Glu	Arg	Ile	Glu	Ile	Pro	Asn	Ile	Asn	Thr	Arg	Met	Phe	Gln	Pro	Met	
			340					345					350			
aag	aat	ctt	tct	cac	att	tat	ttc	aaa	aac	ttt	cga	tac	tgc	tcc	tat	1104
Lys	Asn	Leu	Ser	His	Ile	Tyr	Phe	Lys	Asn	Phe	Arg	Tyr	Cys	Ser	Tyr	
	355						360					365				
gct	ccc	cat	gtc	cga	ata	tgt	atg	ccc	ttg	acg	gac	ggc	att	tct	tca	1152
Ala	Pro	His	Val	Arg	Ile	Cys	Met	Pro	Leu	Thr	Asp	Gly	Ile	Ser	Ser	
	370					375					380					
ttt	gag	gac	ctc	ttg	gct	aac	aat	atc	ctc	aga	ata	ttt	gtc	tgg	gtt	1200
Phe	Glu	Asp	Leu	Leu	Ala	Asn	Asn	Ile	Leu	Arg	Ile	Phe	Val	Trp	Val	
385					390					395					400	
ata	gct	ttc	att	acc	tgc	ttt	gga	aat	ctt	ttt	gtc	att	ggc	atg	aga	1248
Ile	Ala	Phe	Ile	Thr	Cys	Phe	Gly	Asn	Leu	Phe	Val	Ile	Gly	Met	Arg	
				405					410					415		

FIG. 3C

tct ttc att aaa gct gaa aat aca act cac gct atg tcc atc aaa atc	1296
Ser Phe Ile Lys Ala Glu Asn Thr Thr His Ala Met Ser Ile Lys Ile	
420 425 430	
ctt tgt tgt gct gat tgc ctg atg ggt gtt tac ttg ttc ttt gtt ggc	1344
Leu Cys Cys Ala Asp Cys Leu Met Gly Val Tyr Leu Phe Phe Val Gly	
435 440 445	
att ttc gat ata aaa tac cga ggg cag tat cag aag tat gcc ttg ctg	1392
Ile Phe Asp Ile Lys Tyr Arg Gly Gln Tyr Gln Lys Tyr Ala Leu Leu	
450 455 460	
tgg atg gag agc gtg cag tgc cgc ctc atg ggg ttc ctg gcc atg ctg	1440
Trp Met Glu Ser Val Gln Cys Arg Leu Met Gly Phe Leu Ala Met Leu	
465 470 475 480	
tcc acc gaa gtc tct gtt ctg cta ctg acc tac ttg act ttg gag aag	1488
Ser Thr Glu Val Ser Val Leu Leu Leu Thr Tyr Leu Thr Leu Glu Lys	
485 490 495	
ttc ctg gtc att gtc ttc ccc ttc agt aac att cga cct gga aaa cgg	1536
Phe Leu Val Ile Val Phe Pro Phe Ser Asn Ile Arg Pro Gly Lys Arg	
500 505 510	
cag acc tca gtc atc ctc att tgc atc tgg atg gcg gga ttt tta ata	1584
Gln Thr Ser Val Ile Leu Ile Cys Ile Trp Met Ala Gly Phe Leu Ile	
515 520 525	
gct gta att cca ttt tgg aat aag gat tat ttt gga aac ttt tat ggg	1632
Ala Val Ile Pro Phe Trp Asn Lys Asp Tyr Phe Gly Asn Phe Tyr Gly	
530 535 540	
aaa aat gga gta tgt ttc cca ctt tat tat gac caa aca gaa gat att	1680
Lys Asn Gly Val Cys Phe Pro Leu Tyr Tyr Asp Gln Thr Glu Asp Ile	
545 550 555 560	
gga agc aaa ggg tat tct ctt gga att ttc cta ggt gtg aac ttg ctg	1728
Gly Ser Lys Gly Tyr Ser Leu Gly Ile Phe Leu Gly Val Asn Leu Leu	
565 570 575	
gct ttt ctc atc att gtg ttt tcc tat att act atg ttc tgt tcc att	1776
Ala Phe Leu Ile Ile Val Phe Ser Tyr Ile Thr Met Phe Cys Ser Ile	
580 585 590	
caa aaa acc gcc ttg cag acc aca gaa gta agg aat tgt ttt gga aga	1824
Gln Lys Thr Ala Leu Gln Thr Thr Glu Val Arg Asn Cys Phe Gly Arg	
595 600 605	
gag gtg gct gtt gca aat cgt ttc ttt ttt ata gtg ttc tct gat gcc	1872
Glu Val Ala Val Ala Asn Arg Phe Phe Phe Ile Val Phe Ser Asp Ala	
610 615 620	

FIG. 3D

atc tgc tgg att cct gta ttt gta gtt aaa atc ctt tcc ctc ttc cgg	1920
Ile Cys Trp Ile Pro Val Phe Val Val Lys Ile Leu Ser Leu Phe Arg	
625 630 635 640	
gtg gaa ata cca gac aca atg act tcc tgg ata gtg att ttt ttc ctt	1968
Val Glu Ile Pro Asp Thr Met Thr Ser Trp Ile Val Ile Phe Phe Leu	
645 650 655	
cca gtt aac agt gct ttg aat cca atc ctc tat act ctc aca acc aac	2016
Pro Val Asn Ser Ala Leu Asn Pro Ile Leu Tyr Thr Leu Thr Thr Asn	
660 665 670	
ttt ttt aag gac aag ttg aaa cag ctg ctg cac aaa cat cag agg aaa	2064
Phe Phe Lys Asp Lys Leu Lys Gln Leu Leu His Lys His Gln Arg Lys	
675 680 685	
tca att ttc aaa att aaa aaa aaa agt tta tct aca tcc att gtg tgg	2112
Ser Ile Phe Lys Ile Lys Lys Lys Ser Leu Ser Thr Ser Ile Val Trp	
690 695 700	
ata gag gac tcc tct tcc ctg aaa ctt ggg gtt ttg aac aaa ata aca	2160
Ile Glu Asp Ser Ser Ser Leu Lys Leu Gly Val Leu Asn Lys Ile Thr	
705 710 715 720	
ctt gga gac agt ata atg aaa cca gtt tcc tag	2193
Leu Gly Asp Ser Ile Met Lys Pro Val Ser	
725 730	

FIG. 4A

caa ggt agc atg atc act cct tca tgc caa aaa gga tat ttt ccc tgt	48
Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly Tyr Phe Pro Cys	
1 5 10 15	
ggg aat ctt acc aag tgc tta ccc cga gct ttt cac tgt gat ggc aag	96
Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His Cys Asp Gly Lys	
20 25 30	
gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt ggt gac act agt	144
Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys Gly Asp Thr Ser	
35 40 45	
gga tgg gcg acc ata ttt ggc aca gtg cat gga aat gct aac agc gtg	192
Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn Ala Asn Ser Val	
50 55 60	
gcc tta aca cag gag tgc ttt cta aaa cag tat cca caa tgc tgt gac	240
Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro Gln Cys Cys Asp	
65 70 75 80	
tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac tta aag tct gtg	288
Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp Leu Lys Ser Val	
85 90 95	
ccg atg att tct aac aat gtg aca tta ctg tct ctt aag aaa aac aaa	336
Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu Lys Lys Asn Lys	
100 105 110	
atc cac agt ctt cca gat aaa gtt ttc atc aaa tac aca aaa ctt aaa	384
Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr Thr Lys Leu Lys	
115 120 125	
aag ata ttt ctt cag cat aat tgc att aga cac ata tcc agg aaa gca	432
Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile Ser Arg Lys Ala	
130 135 140	
ttt ttt gga tta tgt aat ctg caa ata tta tat ctc aac cac aac tgc	480
Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu Asn His Asn Cys	
145 150 155 160	
atc aca acc ctc aga cct gga ata ttc aaa gac tta cat cag cta act	528
Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu His Gln Leu Thr	
165 170 175	
tgg cta att cta gat gac aat cca ata acc aga att tca cag cgc ttg	576
Trp Leu Ile Leu Asp Asp Asn Pro Ile Thr Arg Ile Ser Gln Arg Leu	
180 185 190	
ttt acg gga tta aat tcc ttg ttt ttc ctg tct atg gtt aat aac tac	624
Phe Thr Gly Leu Asn Ser Leu Phe Phe Leu Ser Met Val Asn Asn Tyr	
195 200 205	

[illegible]

tta Leu	gaa Glu	gct Ala	ctt Leu	ccc Pro	aag Lys	cag Gln	atg Met	tgt Cys	gcc Ala	caa Gln	atg Met	cct Pro	caa Gln	ctc Leu	aac Asn	672
210215220																
tgg Trp	gtg Val	gat Asp	ttg Leu	gaa Glu	ggc Gly	aat Asn	aga Arg	ata Ile	aag Lys	tat Tyr	ctc Leu	aca Thr	aat Asn	tct Ser	acg Thr	720
225230235240																
ttt Phe	ctg Leu	tcg Ser	tgc Cys	gat Asp	tcg Ser	ctc Leu	aca Thr	gtg Val	ctg Leu	gat Asp	ctg Leu	tct Ser	agc Ser	aat Asn	acg Thr	768
245250255																
ata Ile	acg Thr	gag Glu	cta Leu	tca Ser	cct Pro	cac His	ctt Leu	ttt Phe	aaa Lys	gac Asp	ttg Leu	aag Lys	ctt Leu	cta Leu	caa Gln	816
260265270																
aag Lys	ctg Leu	aac Asn	ctg Leu	tca Ser	tcc Ser	aat Asn	cct Pro	ctt Leu	atg Met	tat Tyr	ctt Leu	cac His	aag Lys	aac Asn	cag Gln	864
275280285																
ttt Phe	gaa Glu	agt Ser	ctt Leu	aaa Lys	caa Gln	ctt Leu	cag Gln	tct Ser	cta Leu	gac Asp	ctg Leu	gaa Glu	agg Arg	ata Ile	gag Glu	912
290295300																
att Ile	cca Pro	aat Asn	ata Ile	aac Asn	aca Thr	cga Arg	atg Met	ttt Phe	caa Gln	ccc Pro	atg Met	aag Lys	aat Asn	ctt Leu	tct Ser	960
305310315320																
cac His	att Ile	tat Tyr	ttc Phe	aaa Lys	aac Asn	ttt Phe	cga Arg	tac Tyr	tgc Cys	tcc Ser	tat Tyr	gct Ala	ccc Pro	cat His	gtc Val	1008
325330335																
cga Arg	ata Ile	tgt Cys	atg Met	ccc Pro	ttg Leu	acg Thr	gac Asp	ggc Gly	att Ile	tct Ser	tca Ser	ttt Phe	gag Glu	gac Asp	ctc Leu	1056
340345350																
ttg Leu	gct Ala	aac Asn	aat Asn	atc Ile	ctc Leu	aga Arg										1077
355																

FIG. 5A

atg att gtt ttt ctg gtt ttt aaa cat ctc ttc agc ctc aga ttg att	48
<u>Met Ile Val Phe Leu Val Phe Lys His Leu Phe Ser Leu Arg Leu Ile</u>	
1 5 10 15	
aca atg ttc ttt cta ctt cat ttc atc gtt ctg atc aat gtc aaa gat	96
<u>Thr Met Phe Phe Leu Leu His Phe Ile Val Leu Ile Asn Val Lys Asp</u>	
20 25 30	
ttt gca ctg act caa ggt agc atg atc act cct tca tgc caa aaa gga	144
<u>Phe Ala Leu Thr</u> Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly	
35 40 45	
tat ttt ccc tgt ggg aat ctt acc aag tgc tta ccc cga gct ttt cac	192
<u>Tyr Phe Pro Cys Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His</u>	
50 55 60	
tgt gat ggc aag gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt	240
<u>Cys Asp Gly Lys Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys</u>	
65 70 75 80	
ggg gac act agt gga tgg gcg acc ata ttt ggc aca gtg cat gga aat	288
<u>Gly Asp Thr Ser Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn</u>	
85 90 95	
gct aac agc gtg gcc tta aca cag gag tgc ttt cta aaa cag tat cca	336
<u>Ala Asn Ser Val Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro</u>	
100 105 110	
caa tgc tgt gac tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac	384
<u>Gln Cys Cys Asp Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp</u>	
115 120 125	
tta aag tct gtg ccg atg att tct aac aat gtg aca tta ctg tct ctt	432
<u>Leu Lys Ser Val Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu</u>	
130 135 140	
aag aaa aac aaa atc cac agt ctt cca gat aaa gtt ttc atc aaa tac	480
<u>Lys Lys Asn Lys Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr</u>	
145 150 155 160	
aca aaa ctt aaa aag ata ttt ctt cag cat aat tgc att aga cac ata	528
<u>Thr Lys Leu Lys Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile</u>	
165 170 175	
tcc agg aaa gca ttt ttt gga tta tgt aat ctg caa ata tta att cta	576
<u>Ser Arg Lys Ala Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Ile Leu</u>	
180 185 190	
gat gac aat cca ata acc aga att tca cag cgc ttg ttt acg gga tta	624
<u>Asp Asp Asn Pro Ile Thr Arg Ile Ser Gln Arg Leu Phe Thr Gly Leu</u>	
195 200 205	

FIG. 5B

aat tcc ttg ttt ttc ctg tct atg gtt aat aac tac tta gaa gct ctt	672
Asn Ser Leu Phe Phe Leu Ser Met Val Asn Asn Tyr Leu Glu Ala Leu	
210 215 220	
ccc aag cag atg tgt gcc caa atg cct caa ctc aac tgg gtg gat ttg	720
Pro Lys Gln Met Cys Ala Gln Met Pro Gln Leu Asn Trp Val Asp Leu	
225 230 235 240	
gaa ggc aat aga ata aag tat ctc aca aat tct acg ttt ctg tgc tgc	768
Glu Gly Asn Arg Ile Lys Tyr Leu Thr Asn Ser Thr Phe Leu Ser Cys	
245 250 255	
gat tgc ctc aca gtg ctg gat ctg tct agc aat acg ata acg gag cta	816
Asp Ser Leu Thr Val Leu Asp Leu Ser Ser Asn Thr Ile Thr Glu Leu	
260 265 270	
tca cct cac ctt ttt aaa gac ttg aag ctt cta caa aag cta gac ctg	864
Ser Pro His Leu Phe Lys Asp Leu Lys Leu Leu Gln Lys Leu Asp Leu	
275 280 285	
gaa agg ata gag att cca aat ata aac aca cga atg ttt caa ccc atg	912
Glu Arg Ile Glu Ile Pro Asn Ile Asn Thr Arg Met Phe Gln Pro Met	
290 295 300	
aag aat ctt tct cac att tat ttc aaa aac ttt cga tac tgc tcc tat	960
Lys Asn Leu Ser His Ile Tyr Phe Lys Asn Phe Arg Tyr Cys Ser Tyr	
305 310 315 320	
gct ccc cat gtc cga ata tgt atg ccc ttg acg gac ggc att tct tca	1008
Ala Pro His Val Arg Ile Cys Met Pro Leu Thr Asp Gly Ile Ser Ser	
325 330 335	
ttt gag gac ctc ttg gct aac aat atc ctc aga ata ttt gtc tgg gtt	1056
Phe Glu Asp Leu Leu Ala Asn Asn Ile Leu Arg Ile Phe Val Trp Val	
340 345 350	
ata gct ttc att acc tgc ttt gga aat ctt ttt gtc att ggc atg aga	1104
Ile Ala Phe Ile Thr Cys Phe Gly Asn Leu Phe Val Ile Gly Met Arg	
355 360 365	
tct ttc att aaa gct gaa aat aca act cac gct atg tcc atc aaa atc	1152
Ser Phe Ile Lys Ala Glu Asn Thr Thr His Ala Met Ser Ile Lys Ile	
370 375 380	
ctt tgt tgt gct gat tgc ctg atg ggt gtt tac ttg ttc ttt gtt ggc	1200
Leu Cys Cys Ala Asp Cys Leu Met Gly Val Tyr Leu Phe Phe Val Gly	
385 390 395 400	
att ttc gat ata aaa tac cga ggg cag tat cag aag tat gcc ttg ctg	1248
Ile Phe Asp Ile Lys Tyr Arg Gly Gln Tyr Gln Lys Tyr Ala Leu Leu	
405 410 415	

FIG. 5C

tgg atg gag agc gtg cag tgc cgc ctc atg ggg ttc ctg gcc atg ctg	1296
Trp Met Glu Ser Val Gln Cys Arg Leu Met Gly Phe Leu Ala Met Leu	
420 425 430	
tcc acc gaa gtc tct gtt ctg cta ctg acc tac ttg act ttg gag aag	1344
Ser Thr Glu Val Ser Val Leu Leu Leu Thr Tyr Leu Thr Leu Glu Lys	
435 440 445	
ttc ctg gtc att gtc ttc ccc ttc agt aac att cga cct gga aaa cgg	1392
Phe Leu Val Ile Val Phe Pro Phe Ser Asn Ile Arg Pro Gly Lys Arg	
450 455 460	
cag acc tca gtc atc ctc att tgc atc tgg atg gcg gga ttt tta ata	1440
Gln Thr Ser Val Ile Leu Ile Cys Ile Trp Met Ala Gly Phe Leu Ile	
465 470 475 480	
gct gta att cca ttt tgg aat aag gat tat ttt gga aac ttt tat ggg	1488
Ala Val Ile Pro Phe Trp Asn Lys Asp Tyr Phe Gly Asn Phe Tyr Gly	
485 490 495	
aaa aat gga gta tgt ttc cca ctt tat tat gac caa aca gaa gat att	1536
Lys Asn Gly Val Cys Phe Pro Leu Tyr Tyr Asp Gln Thr Glu Asp Ile	
500 505 510	
gga agc aaa ggg tat tct ctt gga att ttc cta ggt gtg aac ttg ctg	1584
Gly Ser Lys Gly Tyr Ser Leu Gly Ile Phe Leu Gly Val Asn Leu Leu	
515 520 525	
gct ttt ctc atc att gtg ttt tcc tat att act atg ttc tgt tcc att	1632
Ala Phe Leu Ile Ile Val Phe Ser Tyr Ile Thr Met Phe Cys Ser Ile	
530 535 540	
caa aaa acc gcc ttg cag acc aca gaa gta agg aat tgt ttt gga aga	1680
Gln Lys Thr Ala Leu Gln Thr Thr Glu Val Arg Asn Cys Phe Gly Arg	
545 550 555 560	
gag gtg gct gtt gca aat cgt ttc ttt ttt ata gtg ttc tct gat gcc	1728
Glu Val Ala Val Ala Asn Arg Phe Phe Phe Ile Val Phe Ser Asp Ala	
565 570 575	
atc tgc tgg att cct gta ttt gta gtt aaa atc ctt tcc ctc ttc cgg	1776
Ile Cys Trp Ile Pro Val Phe Val Val Lys Ile Leu Ser Leu Phe Arg	
580 585 590	
gtg gaa ata cca gac aca atg act tcc tgg ata gtg att ttt ttc ctt	1824
Val Glu Ile Pro Asp Thr Met Thr Ser Trp Ile Val Ile Phe Phe Leu	
595 600 605	
cca gtt aac agt gct ttg aat cca atc ctc tat act ctc aca acc aac	1872
Pro Val Asn Ser Ala Leu Asn Pro Ile Leu Tyr Thr Leu Thr Thr Asn	
610 615 620	

FIG. 5D

ttt ttt aag gac aag ttg aaa cag ctg ctg cac aaa cat cag agg aaa	1920
Phe Phe Lys Asp Lys Leu Lys Gln Leu Leu His Lys His Gln Arg Lys	
625 630 635 640	
tca att ttc aaa att aaa aaa aaa agt tta tct aca tcc att gtg tgg	1968
Ser Ile Phe Lys Ile Lys Lys Lys Ser Leu Ser Thr Ser Ile Val Trp	
645 650 655	
ata gag gac tcc tct tcc ctg aaa ctt ggg gtt ttg aac aaa ata aca	2016
Ile Glu Asp Ser Ser Ser Leu Lys Leu Gly Val Leu Asn Lys Ile Thr	
660 665 670	
ctt gga gac agt ata atg aaa cca gtt tcc tag	2049
Leu Gly Asp Ser Ile Met Lys Pro Val Ser	
675 680	

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FIG. 6A

caa ggt agc atg atc act cct tca tgc caa aaa gga tat ttt ccc tgt	48
Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly Tyr Phe Pro Cys	
1 5 10 15	
ggg aat ctt acc aag tgc tta ccc cga gct ttt cac tgt gat ggc aag	96
Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His Cys Asp Gly Lys	
20 25 30	
gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt ggt gac act agt	144
Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys Gly Asp Thr Ser	
35 40 45	
gga tgg gcg acc ata ttt ggc aca gtg cat gga aat gct aac agc gtg	192
Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn Ala Asn Ser Val	
50 55 60	
gcc tta aca cag gag tgc ttt cta aaa cag tat cca caa tgc tgt gac	240
Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro Gln Cys Cys Asp	
65 70 75 80	
tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac tta aag tct gtg	288
Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp Leu Lys Ser Val	
85 90 95	
ccg atg att tct aac aat gtg aca tta ctg tct ctt aag aaa aac aaa	336
Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu Lys Lys Asn Lys	
100 105 110	
atc cac agt ctt cca gat aaa gtt ttc atc aaa tac aca aaa ctt aaa	384
Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr Thr Lys Leu Lys	
115 120 125	
aag ata ttt ctt cag cat aat tgc att aga cac ata tcc agg aaa gca	432
Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile Ser Arg Lys Ala	
130 135 140	
ttt ttt gga tta tgt aat ctg caa ata tta att cta gat gac aat cca	480
Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Ile Leu Asp Asp Asn Pro	
145 150 155 160	
ata acc aga att tca cag cgc ttg ttt acg gga tta aat tcc ttg ttt	528
Ile Thr Arg Ile Ser Gln Arg Leu Phe Thr Gly Leu Asn Ser Leu Phe	
165 170 175	
ttc ctg tct atg gtt aat aac tac tta gaa gct ctt ccc aag cag atg	576
Phe Leu Ser Met Val Asn Asn Tyr Leu Glu Ala Leu Pro Lys Gln Met	
180 185 190	
tgt gcc caa atg cct caa ctc aac tgg gtg gat ttg gaa ggc aat aga	624
Cys Ala Gln Met Pro Gln Leu Asn Trp Val Asp Leu Glu Gly Asn Arg	
195 200 205	

FIG. 6B

ata aag tat ctc aca aat tct acg ttt ctg tcg tgc gat tcg ctc aca	672
Ile Lys Tyr Leu Thr Asn Ser Thr Phe Leu Ser Cys Asp Ser Leu Thr	
210 215 220	
gtg ctg gat ctg tct agc aat acg ata acg gag cta tca cct cac ctt	720
Val Leu Asp Leu Ser Ser Asn Thr Ile Thr Glu Leu Ser Pro His Leu	
225 230 235 240	
ttt aaa gac ttg aag ctt cta caa aag cta gac ctg gaa agg ata gag	768
Phe Lys Asp Leu Lys Leu Leu Gln Lys Leu Asp Leu Glu Arg Ile Glu	
245 250 255	
att cca aat ata aac aca cga atg ttt caa ccc atg aag aat ctt tct	816
Ile Pro Asn Ile Asn Thr Arg Met Phe Gln Pro Met Lys Asn Leu Ser	
260 265 270	
cac att tat ttc aaa aac ttt cga tac tgc tcc tat gct ccc cat gtc	864
His Ile Tyr Phe Lys Asn Phe Arg Tyr Cys Ser Tyr Ala Pro His Val	
275 280 285	
cga ata tgt atg ccc ttg acg gac ggc att tct tca ttt gag gac ctc	912
Arg Ile Cys Met Pro Leu Thr Asp Gly Ile Ser Ser Phe Glu Asp Leu	
290 295 300	
ttg gct aac aat atc ctc aga	933
Leu Ala Asn Asn Ile Leu Arg	
305 310	

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FIG. 7A

atg att gtt ttt ctg gtt ttt aaa cat ctc ttc agc ctc aga ttg att	48
<u>Met Ile Val Phe Leu Val Phe Lys His Leu Phe Ser Leu Arg Leu Ile</u>	
1 5 10 15	
aca atg ttc ttt cta ctt cat ttc atc gtt ctg atc aat gtc aaa gat	96
<u>Thr Met Phe Phe Leu Leu His Phe Ile Val Leu Ile Asn Val Lys Asp</u>	
20 25 30	
ttt gca ctg act caa ggt agc atg atc act cct tca tgc caa aaa gga	144
<u>Phe Ala Leu Thr</u> Gln Gly Ser Met Ile Thr Pro Ser Cys Gln Lys Gly	
35 40 45	
tat ttt ccc tgt ggg aat ctt acc aag tgc tta ccc cga gct ttt cac	192
<u>Tyr Phe Pro Cys Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His</u>	
50 55 60	
tgt gat ggc aag gat gac tgt ggg aac ggg gcg gac gaa gag aac tgt	240
<u>Cys Asp Gly Lys Asp Asp Cys Gly Asn Gly Ala Asp Glu Glu Asn Cys</u>	
65 70 75 80	
ggg gac act agt gga tgg gcg acc ata ttt ggc aca gtg cat gga aat	288
<u>Gly Asp Thr Ser Gly Trp Ala Thr Ile Phe Gly Thr Val His Gly Asn</u>	
85 90 95	
gct aac agc gtg gcc tta aca cag gag tgc ttt cta aaa cag tat cca	336
<u>Ala Asn Ser Val Ala Leu Thr Gln Glu Cys Phe Leu Lys Gln Tyr Pro</u>	
100 105 110	
caa tgc tgt gac tgc aaa gaa act gaa ttg gaa tgt gta aat ggt gac	384
<u>Gln Cys Cys Asp Cys Lys Glu Thr Glu Leu Glu Cys Val Asn Gly Asp</u>	
115 120 125	
tta aag tct gtg ccg atg att tct aac aat gtg aca tta ctg tct ctt	432
<u>Leu Lys Ser Val Pro Met Ile Ser Asn Asn Val Thr Leu Leu Ser Leu</u>	
130 135 140	
aag aaa aac aaa atc cac agt ctt cca gat aaa gtt ttc atc aaa tac	480
<u>Lys Lys Asn Lys Ile His Ser Leu Pro Asp Lys Val Phe Ile Lys Tyr</u>	
145 150 155 160	
aca aaa ctt aaa aag ata ttt ctt cag cat aat tgc att aga cac ata	528
<u>Thr Lys Leu Lys Lys Ile Phe Leu Gln His Asn Cys Ile Arg His Ile</u>	
165 170 175	
tcc agg aaa gca ttt ttt gga tta tgt aat ctg caa ata tta tat ctc	576
<u>Ser Arg Lys Ala Phe Phe Gly Leu Cys Asn Leu Gln Ile Leu Tyr Leu</u>	
180 185 190	
aac cac aac tgc atc aca acc ctc aga cct gga ata ttc aaa gac tta	624
<u>Asn His Asn Cys Ile Thr Thr Leu Arg Pro Gly Ile Phe Lys Asp Leu</u>	
195 200 205	

FIG. 7B

cat	cag	cta	act	tgg	cta	att	cta	gat	gac	aat	cca	ata	acc	aga	att	672
His	Gln	Leu	Thr	Trp	Leu	Ile	Leu	Asp	Asp	Asn	Pro	Ile	Thr	Arg	Ile	
210						215					220					
tca	cag	cgc	ttg	ttt	acg	gga	tta	aat	tcc	ttg	ttt	ttc	ctg	tct	atg	720
Ser	Gln	Arg	Leu	Phe	Thr	Gly	Leu	Asn	Ser	Leu	Phe	Phe	Leu	Ser	Met	
225					230					235					240	
gtt	aat	aac	tac	tta	gaa	gct	ctt	ccc	aag	cag	atg	tgt	gcc	caa	atg	768
Val	Asn	Asn	Tyr	Leu	Glu	Ala	Leu	Pro	Lys	Gln	Met	Cys	Ala	Gln	Met	
				245					250					255		
cct	caa	ctc	aac	tgg	gtg	gat	ttg	gaa	ggc	aat	aga	ata	aag	tat	ctc	816
Pro	Gln	Leu	Asn	Trp	Val	Asp	Leu	Glu	Gly	Asn	Arg	Ile	Lys	Tyr	Leu	
			260					265						270		
aca	aat	tct	acg	ttt	ctg	tcg	tgc	gat	tcg	ctc	aca	gtg	ctg	gat	ctg	864
Thr	Asn	Ser	Thr	Phe	Leu	Ser	Cys	Asp	Ser	Leu	Thr	Val	Leu	Asp	Leu	
		275					280						285			
tct	agc	aat	acg	ata	acg	gag	cta	tca	cct	cac	ctt	ttt	aaa	gac	ttg	912
Ser	Ser	Asn	Thr	Ile	Thr	Glu	Leu	Ser	Pro	His	Leu	Phe	Lys	Asp	Leu	
	290					295					300					
aag	ctt	cta	caa	aag	ctg	aac	ctg	tca	tcc	aat	cct	ctt	atg	tat	ctt	960
Lys	Leu	Leu	Gln	Lys	Leu	Asn	Leu	Ser	Ser	Asn	Pro	Leu	Met	Tyr	Leu	
305					310					315					320	
cac	aag	aac	cag	ttt	gaa	agt	ctt	aaa	caa	ctt	cag	tct	cta	gac	ctg	1008
His	Lys	Asn	Gln	Phe	Glu	Ser	Leu	Lys	Gln	Leu	Gln	Ser	Leu	Asp	Leu	
				325					330					335		
gaa	agg	ata	gag	att	cca	aat	ata	aac	aca	cga	atg	ttt	caa	ccc	atg	1056
Glu	Arg	Ile	Glu	Ile	Pro	Asn	Ile	Asn	Thr	Arg	Met	Phe	Gln	Pro	Met	
			340					345					350			
aag	aat	ctt	tct	cac	ata	gtt	caa	tat	tat	gat	gtg	ccg	aca	tga		1101
Lys	Asn	Leu	Ser	His	Ile	Val	Gln	Tyr	Tyr	Asp	Val	Pro	Thr			
		355					360					365				

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Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

FIG. 8B

cag aag tcc ttt atg ggg tta aac tcc ttg ttt ttc ttg tcc atg gtg	672
Gln Lys Ser Phe Met Gly Leu Asn Ser Leu Phe Phe Leu Ser Met Val	
210 215 220	
ggt aac cgg ctc gag gcc ctt cct gaa aca ttg tgt gct cag atg cct	720
Gly Asn Arg Leu Glu Ala Leu Pro Glu Thr Leu Cys Ala Gln Met Pro	
225 230 235 240	
caa ctc aac tgg gtg gat ctg gca aac aat gga ata aag tac ata acg	768
Gln Leu Asn Trp Val Asp Leu Ala Asn Asn Gly Ile Lys Tyr Ile Thr	
245 250 255	
aac tcc acc ttc cta acg tgc gac tcg ctc acg gtt ctg ttt ctg cct	816
Asn Ser Thr Phe Leu Thr Cys Asp Ser Leu Thr Val Leu Phe Leu Pro	
260 265 270	
aga aat caa att ggt ttt gtt cca gag aag aca ttt tct tca tta aaa	864
Arg Asn Gln Ile Gly Phe Val Pro Glu Lys Thr Phe Ser Ser Leu Lys	
275 280 285	
aat tta gga gaa ctg gac ctg tct agc aat atg ata aca aaa ctc cca	912
Asn Leu Gly Glu Leu Asp Leu Ser Ser Asn Met Ile Thr Lys Leu Pro	
290 295 300	
gtc cac ctt ttc agc gac ctt cat ctt ctc cag aag ctg aac ctg tca	960
Val His Leu Phe Ser Asp Leu His Leu Leu Gln Lys Leu Asn Leu Ser	
305 310 315 320	
tcc aac cct ctt ctg tat gtc cac aag aac cag ttt gga agt ctc aaa	1008
Ser Asn Pro Leu Leu Tyr Val His Lys Asn Gln Phe Gly Ser Leu Lys	
325 330 335	
caa ctt cag tct cta gac ctg gaa agg ata gag att cca aac ata agc	1056
Gln Leu Gln Ser Leu Asp Leu Glu Arg Ile Glu Ile Pro Asn Ile Ser	
340 345 350	
aca gga atg ttc cag cca atg aag aac ctt tct cac att tat ttg aaa	1104
Thr Gly Met Phe Gln Pro Met Lys Asn Leu Ser His Ile Tyr Leu Lys	
355 360 365	
acc ttt cga tac tgc tcc tat gtc ccc cat gtc cga atc tgt atg ccg	1152
Thr Phe Arg Tyr Cys Ser Tyr Val Pro His Val Arg Ile Cys Met Pro	
370 375 380	
tcg act gat ggt att tct tcg tct gag gac ctc ttg gct aac ggt atc	1200
Ser Thr Asp Gly Ile Ser Ser Ser Glu Asp Leu Leu Ala Asn Gly Ile	
385 390 395 400	
ctc aga gtg tct gtc tgg gtt ata gct ttc att acc tgc gtt ggg aat	1248
Leu Arg Val Ser Val Trp Val Ile Ala Phe Ile Thr Cys Val Gly Asn	
405 410 415	

FIG. 8C

ttc ctt gtc ata gcc gtg aga tct ctc att aag gct gag aat aca act	1296
Phe Leu Val Ile Ala Val Arg Ser Leu Ile Lys Ala Glu Asn Thr Thr	
420 425 430	
cac gct atg tcc atc aaa atc ctt tgt tgt gcc gat tgc ctg atg ggg	1344
His Ala Met Ser Ile Lys Ile Leu Cys Cys Ala Asp Cys Leu Met Gly	
435 440 445	
gtg tac ctg ttc tcc gtg ggc gtc ttt gac atc aag tac cga ggg cag	1392
Val Tyr Leu Phe Ser Val Gly Val Phe Asp Ile Lys Tyr Arg Gly Gln	
450 455 460	
tat cag aag tat gcg ctg ctg tgg atg gag agt gtg ccc tgc cgc ctg	1440
Tyr Gln Lys Tyr Ala Leu Leu Trp Met Glu Ser Val Pro Cys Arg Leu	
465 470 475 480	
ctg ggc ttc ctg gcc acg ctg tcc aca gag gtc tcg gtg ctg ctg ctg	1488
Leu Gly Phe Leu Ala Thr Leu Ser Thr Glu Val Ser Val Leu Leu Leu	
485 490 495	
aca ttc ctg acg ctg gag aag ttc ctt gtc ata gta ttc cct ttc agc	1536
Thr Phe Leu Thr Leu Glu Lys Phe Leu Val Ile Val Phe Pro Phe Ser	
500 505 510	
aac ctg cgc ctg ggc aag cgc cag act gct gtg gcc ctc gcc agc atc	1584
Asn Leu Arg Leu Gly Lys Arg Gln Thr Ala Val Ala Leu Ala Ser Ile	
515 520 525	
tgg gtg gtg gga ttt ctc ata gcg gcc gtt ccg ttc acc aga gag gat	1632
Trp Val Val Gly Phe Leu Ile Ala Ala Val Pro Phe Thr Arg Glu Asp	
530 535 540	
tat ttc ggc aac ttt tat ggg aaa aat gga gtc tgc ttc cca ctt cat	1680
Tyr Phe Gly Asn Phe Tyr Gly Lys Asn Gly Val Cys Phe Pro Leu His	
545 550 555 560	
tat gac caa gca gaa gat ttt gga agt aga ggg tac tcc ctt ggg att	1728
Tyr Asp Gln Ala Glu Asp Phe Gly Ser Arg Gly Tyr Ser Leu Gly Ile	
565 570 575	
ttc cta ggt gtg aac ttg ctg gct ttc ctc gtc atc gtg att tcc tat	1776
Phe Leu Gly Val Asn Leu Leu Ala Phe Leu Val Ile Val Ile Ser Tyr	
580 585 590	
gtc acc atg ttc tgc tcc att cat aaa aca gcc ctt cag act gca gaa	1824
Val Thr Met Phe Cys Ser Ile His Lys Thr Ala Leu Gln Thr Ala Glu	
595 600 605	
gtg agg agc cac atc ggg aag gag gtg gct gtt gca aac cgg ttc ttt	1872
Val Arg Ser His Ile Gly Lys Glu Val Ala Val Ala Asn Arg Phe Phe	
610 615 620	

FIG. 8D

ttt atc gtg ttc tct gat gcc atc tgc tgg atc cct gtg ttt gtc gtt	1920
Phe Ile Val Phe Ser Asp Ala Ile Cys Trp Ile Pro Val Phe Val Val	
625 630 635 640	
aag atc ctg tct ctc ctt caa gtg gag ata cca ggc aca atc act tcc	1968
Lys Ile Leu Ser Leu Leu Gln Val Glu Ile Pro Gly Thr Ile Thr Ser	
645 650 655	
tgg atc gtg gtt ttt ttc ctt ccg gtg aac agc gcc tta aac ccc atc	2016
Trp Ile Val Val Phe Phe Leu Pro Val Asn Ser Ala Leu Asn Pro Ile	
660 665 670	
ctc tac act ctg acg acc tcc ttt ttt aag gac aag ttg aaa cag ttg	2064
Leu Tyr Thr Leu Thr Thr Ser Phe Phe Lys Asp Lys Leu Lys Gln Leu	
675 680 685	
ctg cac aaa cat cgg agg aaa ccc atc ttc aaa gtt aag aag aaa agt	2112
Leu His Lys His Arg Arg Lys Pro Ile Phe Lys Val Lys Lys Ser	
690 695 700	
tta tcc gct tcc att gtg tgg aca gac gag tct tca ctt aaa ctt gga	2160
Leu Ser Ala Ser Ile Val Trp Thr Asp Glu Ser Ser Leu Lys Leu Gly	
705 710 715 720	
gtg ttg agc aaa ata gcc ctt ggg gac agt ata atg aag ccg gtc tcc	2208
Val Leu Ser Lys Ile Ala Leu Gly Asp Ser Ile Met Lys Pro Val Ser	
725 730 735	
ccg tag	2214
Pro	

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FIG. 9A

gac agc agt atg gtg gct cct ctg tgc ccc aaa ggg tat ttt ccc tgt	48
Asp Ser Ser Met Val Ala Pro Leu Cys Pro Lys Gly Tyr Phe Pro Cys	
1 5 10 15	
ggg aat ctc acc aaa tgc ttg ccc cga gcc ttt cac tgc gat ggt gtg	96
Gly Asn Leu Thr Lys Cys Leu Pro Arg Ala Phe His Cys Asp Gly Val	
20 25 30	
gat gat tgc ggg aat ggt gcc gac gag gac aac tgt ggt gac act agt	144
Asp Asp Cys Gly Asn Gly Ala Asp Glu Asp Asn Cys Gly Asp Thr Ser	
35 40 45	
gga tgg aca acc ata ttt ggc aca gtc cat ggg aat gtc aat aaa gtg	192
Gly Trp Thr Thr Ile Phe Gly Thr Val His Gly Asn Val Asn Lys Val	
50 55 60	
aca ttg aca cag gag tgc ttt ctc agc cag tat cca cag cac tgt tac	240
Thr Leu Thr Gln Glu Cys Phe Leu Ser Gln Tyr Pro Gln His Cys Tyr	
65 70 75 80	
tgc aga gaa aat gaa ctg gaa tgt gta aag gct gac tta aaa gct gtg	288
Cys Arg Glu Asn Glu Leu Glu Cys Val Lys Ala Asp Leu Lys Ala Val	
85 90 95	
cca aag gtt tcc agc aac gta aca tta cta tct ctt aag aaa aac aaa	336
Pro Lys Val Ser Ser Asn Val Thr Leu Leu Ser Leu Lys Lys Asn Lys	
100 105 110	
atc cac aga ctt cca gtc aag gtc ttc agc aga tac aca gaa ctc aga	384
Ile His Arg Leu Pro Val Lys Val Phe Ser Arg Tyr Thr Glu Leu Arg	
115 120 125	
aag ata tac ctt cag cac aac tgc atc aca cac atc tcc agg aga gca	432
Lys Ile Tyr Leu Gln His Asn Cys Ile Thr His Ile Ser Arg Arg Ala	
130 135 140	
ttc ctt gga tta cat aat cta caa ata ctg tat ctc agc cat aac tgc	480
Phe Leu Gly Leu His Asn Leu Gln Ile Leu Tyr Leu Ser His Asn Cys	
145 150 155 160	
att acc tct ctc agg cct ggg ata ttc aaa gac ttg cat cag ctt gct	528
Ile Thr Ser Leu Arg Pro Gly Ile Phe Lys Asp Leu His Gln Leu Ala	
165 170 175	
tgg cta att tta gat gac aac ccg atc acc aga atc tca cag aag tcc	576
Trp Leu Ile Leu Asp Asp Asn Pro Ile Thr Arg Ile Ser Gln Lys Ser	
180 185 190	
ttt atg ggg tta aac tcc ttg ttt ttc ttg tcc atg gtg ggt aac cgg	624
Phe Met Gly Leu Asn Ser Leu Phe Phe Leu Ser Met Val Gly Asn Arg	
195 200 205	

FIG. 9B

ctc gag gcc ctt cct gaa aca ttg tgt gct cag atg cct caa ctc aac	672
Leu Glu Ala Leu Pro Glu Thr Leu Cys Ala Gln Met Pro Gln Leu Asn	
210 215 220	
tggtgtgatctggcgaacaaatggaataaagtactataacgaacaccacc	720
Trp Val Asp Leu Ala Asn Asn Gly Ile Lys Tyr Ile Thr Asn Ser Thr	
225 230 235 240	
ttcctaactgtcgacacgtctcactgtttctgacctagaatcaa	768
Phe Leu Thr Cys Asp Ser Leu Thr Val Leu Phe Leu Pro Arg Asn Gln	
245 250 255	
attggttttggtccaagagacaaatggttttcttcaaaaatgga	816
Ile Gly Phe Val Pro Glu Lys Thr Phe Ser Ser Leu Lys Asn Leu Gly	
260 265 270	
gaa ctg gac ctg tct agc aat atg ata aca aaa ctc cca gtc cac ctt	864
Glu Leu Asp Leu Ser Ser Asn Met Ile Thr Lys Leu Pro Val His Leu	
275 280 285	
ttc agc gac ctt cat ctt ctc cag aag ctg aac ctg tca tcc aac cct	912
Phe Ser Asp Leu His Leu Leu Gln Lys Leu Asn Leu Ser Ser Asn Pro	
290 295 300	
ctt ctg tat gtc cac aag aac cag ttt gga agt ctc aaa caa ctt cag	960
Leu Leu Tyr Val His Lys Asn Gln Phe Gly Ser Leu Lys Gln Leu Gln	
305 310 315 320	
tctctaactgtgaaaggataagattccaacataagcacaaggatg	1008
Ser Leu Asp Leu Glu Arg Ile Glu Ile Pro Asn Ile Ser Thr Gly Met	
325 330 335	
ttccagccaatgaagaacctttctcacatttatgtgaaaacccttcga	1056
Phe Gln Pro Met Lys Asn Leu Ser His Ile Tyr Leu Lys Thr Phe Arg	
340 345 350	
tactgtctctattgtcccatgtccgaatctgtatgctgtctgactgat	1104
Tyr Cys Ser Tyr Val Pro His Val Arg Ile Cys Met Pro Ser Thr Asp	
355 360 365	
ggtatttcttcgtcttgaggacctcttggtgctaacggt	1140
Gly Ile Ser Ser Ser Glu Asp Leu Leu Ala Asn Gly	
370 375 380	

FIG. 10A

1 MIVFLVFKHLFSLRLITMFFLLHFIVLINVKDFALTQGSMTIPSCQKGYF 50
 1MTSGSVFFYILIFGKYFSHGGGQDV..KCSLGYF 32

51 PCGNLTKCLPRAFHCDGKDDCGNGADEENCAGDTSGWATIFGTVHGNANSV 100
 33 PCGNITKCLPQLLHCNGVDDCGNQADEDNCGDNNGWSMQFDKYFASYK 82

101ALTQECFLKQYPQCCDKETELECVDLKSVPISMISNNVTLLS 143
 83 TSQYPFEAETPECLVGSVPVQCLCQGLELDCDETNLRAVPSVSSNVTAMS 132

144 LKKNKIHSPLDKVFIKYTKLKKIFLQHNCIRHISRKAFFGLCNLQILYLN 193
 133 LQWNLIRKLPPDCFKNYHDLQKLYLQNNKITSISIIYAFRGLNSLTCLYLS 182

194 HNCITTLRPGIFKDLHQLTWLILDDNPITRISQRLFTGLNSLFFLSMVNN 243
 183 HNRTFLKPGVFEDLHRLEWLIIEDNHLRSISPPTFYGLNSLILLVLMNN 232

244 YLEALP.KQMCQMPQLNWVDLEGNRIKYLTNSTFLSCDSLTVLFLPRNQ 292
 233 VLTRLPLDKPLCQHMPRLHWDLEGNHIHNLRLTFISCSNLTVLVMRKNK 282

293 IGFVPEKTFSSSLKNLGELDLSSNTITELSPHLFKDLKLLQKLNLSNPLM 342
 283 INHLNENTFAPLQKLDELGLGSKNIENLPPLIFKDLKELSQLNLSYNPIQ 332

343 YLHKNQFESLKQLQSLDLERIEIPNINTRMFQPMKNLSHIYFKNFRYCSY 392
 333 KIQANQFDYLVKLKSLLEGIEISNIQRMFRPLMNLSHIYFKKFQYCGY 382

393 APHVRICMPLTDGISSFEDLLANNILRIFVWVIAFITCFGNLFVIGMRSF 442
 383 APHVRSCKPNTDGISSLENLLASIIQRFVWVVSATCFGNIFVICMRPY 432

443 IKAENTTHAMSIKILCCADCLMGVYLFFVGIFDIKYRGQYQKYALLWMES 492
 433 IRSENKLYAMSIISLCCADCLMGIYLFVIGGFDLKFRGEYNKHAQLWMES 482

493 VQCRLMGFLAMLSTEVSVLLLTLYLTLEKFLVIVFPFSNIRPGKRQTSVIL 542
 483 THCQLVGSLAILSTEVSVLLLTFLTLEKYICIVYPFRVCVRPGKCRITTVL 532

FIG. 10B

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543 ICIWMAGFLIAVIPFWNKDYFGNFGKNGVCFPLYDQTEDIGSKGYSLG 592
    | | | . | | : | | | | : | | : | | | | | : : | | | | . | |
533 ILIWITGFIVAFIPLSNKEFFKNYYGTNGVCFPLHSEDTE SIGAQIYSVA 582

593 IFLGVNLLAFLIIIVFSYITMFCSIQKTALQTTEVRNCFGREVAVANRFFF 642
    | | | : | | | : | | | | . | | | : . . : | | : | | : | . . | | | |
583 IFLGINLAAFI IIIVFSYGSMFYSVHQSAITATEIRNQVKKEMILAKRFFF 632

643 IVFSDAICWIPVFVVKILSLFRVEIPDTMTSWIVIFFLPVNSALNPILYT 692
    | | | . | | : | | | : | | | | | | . | | | | . | | | : | | | | : | | | | | | | |
633 IVFTDALCWIPIFVVKFLLQVEIPGTITSWVVFILPINSALNPILYT 682

693 LTTNFFKDKLKQLLHKH.QRKSIFKIKKKSLSTSIVWIEDSSSLKLGVLN 741
    | | | | | : : . : : | | | . . | . . | : | : | : | : | : |
683 LTTRPFKEMIHRFWYNYRQRKSMDSKGQKTYAPSFIVVE.....MWPLQ 726

742 KITLGDSIMKPVS..... 754
    . : : | | |
727 E..MPPELMKPDLFYPCEMSLISQSTRLN SYS 757

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FIG. 11B

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551 KGYSLGIFLGVNLLAFLIIVFSYITMFCSIQKTALQTTEVRNCFGREAV 600
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
551 RGYSLGIFLGVNLLAFLVIVISYVTMFCSIHKTALQTAEVRSHIGKEVAV 600

601 ANRFFFIVFSDAICWIPVFVVKILSLFRVEIPDTMTSWIVIFFLPVNSAL 650
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
601 ANRFFFIVFSDAICWIPVFVVKILSLLQVEIPGTITSWIVVFFLPVNSAL 650

651 NPILYTLTTNFFKDKLKQLLHKHQRKSIFKIKKKSLSTSIVWIEDSSSLK 700
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
651 NPILYTLTTSFFKDKLKQLLHKHRRKPIFKVKKKSLSASIVW.TDESSLK 699

701 LGVLNKITLGDSIMKPVS.. 718
   ||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
700 LGVLSKIALGDSIMKPVSP 718

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1 1

1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308</
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